

The following pages are a few public health concepts to assist in interpreting data presented in *Healthy Maine 2010*.

WHY ASSOCIATION DOES NOT NECESSARILY MEAN CAUSATION:

Epidemiology often looks at associations of events and diseases, for instance, exposure to cigarette smoking and developing lung cancer. Although studies showing associations are often reported in medical and public health journals and subsequently picked up by the media, an association does not necessarily mean causation. Four common possibilities that can explain an association:

1. The association can be due to chance. Tests of statistical significance are important in determining the probability the association is due to chance. Some examples include a T-test (which compares the means of two sets of data) and a chi-square test (which also compares the outcomes of two sets of data). P values are often measured from tests of statistical significance in order to assess the probability a test result occurred by chance. By convention, if the P value is less than or equal to 0.05, there is no more than a 5% or 1 in 20 probability the result is seen by chance and, therefore, the association is probably statistically significant. Even if an association is true and due to an effect causing a disease, the P value can be large because of a small sample size. Confidence intervals are used to show the range of data results within which the true values are assured to be. Generally, the width of the confidence interval is affected by the sample size – a larger sample size results in a narrower confidence interval.
2. The association can be due to a bias such as when non-comparable criteria are used to enroll participants (selection bias), or when non-comparable information is obtained from the different populations studied (observation bias), or when investigators elicit or interpret information differently (interviewer bias), or the participants report events in a non-comparable manner (recall bias).
3. The association can be due to a mixing of effects between the exposure, the disease, and a confounding factor – a third factor that is associated with the exposure and that can affect the risk of developing the disease. Age is a common confounding factor, especially with many chronic diseases. Therefore, when comparing chronic disease rates between different time frames or geographical areas, the rates should be age-adjusted in order to make them comparable. Alternatively, disease rates only for pertinent age groups should be compared.
4. The event (exposure) may contribute toward causing the disease; i.e., the association is a causal one. Determining this requires addressing all of the above issues and also looking at the strength or magnitude of the association, the biologic credibility, consistency with other results, if the time sequence makes sense, and if there appears to be a dose-response relationship.

Epidemiology is the study of the distribution and determinants of disease frequency in people. That is, epidemiology is concerned with the frequencies and types of illnesses in groups of people and with the factors that influence their distribution.

Relative Risk is a common measure used to show the magnitude of an association, and is often examined in making a judgment pertaining to causality. Relative risk can be expressed in different ways, depending on the study design. For instance, in a Cohort study (in which participants are selected based on their exposure or non-exposure to a possible risk factor for a disease), relative risk is expressed as the incidence of a disease in those exposed to a possible risk factor divided by the incidence of the same disease in those not exposed to the risk factor. In a Case Control study, (in which the participants are selected based on their disease status), the relative risk can be expressed as an Odds Ratio. The Odds Ratio is the ratio of the odds of exposure among the cases to that among the controls.

Hennekens, C., J. Buring, *Epidemiology in Medicine*, Little, Brown, and Company, 1987.

SENSITIVITY AND SPECIFICITY

- Screening tests are evaluated based on their sensitivity and specificity.
- A test with high sensitivity means it has a high ability to assure that people who have the disease will test positive and, therefore, will have a high likelihood to avoid missing a true case of the disease.
- A test with high specificity means that it has a high ability to assure that a negative test result means people do not have the disease.
- Sensitivity and specificity are interrelated. Loosening the criteria that makes a test positive means that more people who have the disease will test positive (increased sensitivity), but so will more people who do not have the disease (decreased specificity, resulting in false positive results).
- And, conversely, making more stringent the criteria that makes a test positive means that more people who actually have the disease will test negative and their disease will, therefore, be missed (decreased sensitivity, resulting in false negative results); yet more people who test negative will actually not have the disease (increased specificity).

WHY CAN'T WE SIMPLY COMPARE CRUDE DISEASE RATES?

One common problem comparing disease or death rates between populations is that the groups may differ with respect to characteristics such as age, sex, or race that may affect the overall rate of disease. These differences can make crude rates not comparable. For instance, crude death rates due to cancer in the US have dramatically increased over the past 100 years. However, the population has also aged. Since cancer mortality rates rise dramatically with age, the higher crude death rates seen now are at least in part due to overall aging of the population.

MEDIAN AND MEANS

Median is the 50th percentile, or the middle of the data, the value at which half of the observations are above and half are below.

Mean is the average of the data.

When can medians and means be very different from one another when used to describe the same data? A common example is when there are extreme values, or outliers. For instance, if five people's ages are: 34, 35, 36, 37, and 80, the median is 36 and the mean is 44. Therefore, the advantage of using the median is that it is not affected by extreme values. However, this can also be a disadvantage because it provides no information about distribution of the values since its derivation is based on rank.

THERE ARE TWO WAYS TO MAKE TWO POPULATIONS COMPARABLE WHEN KNOWN CHARACTERISTICS ARE DISTRIBUTED DIFFERENTLY BETWEEN THEM:

1. Compare category-specific rates. For example, one can compare cancer mortality rates in 1900 and 2000 for each age group. Age-specific rates for cancer deaths tended to increase only slightly.
2. Adjust the rates for the characterization; in other words, perform standardization. This can be done by direct and indirect methods, but both methods use a weighted average of category-specific rates. They differ in the source of the weights and rates used. In indirect standardization, rates from a standard population are applied to weights in the study group. In direct standardization, category-specific rates observed are applied to a single standard population. Often the US population for a census year is used as a standard population for comparison.

RATIO, PROPORTION, PERCENTAGE, RATE

Ratio is a general term that means there is a numerator (the top number in a fraction) and a denominator (the bottom number in a fraction). Types of ratios include proportions, percentages, and rates.

Proportion is a ratio in which the population in the numerator is also included in the denominator. An example is proportion of women giving birth who have a C-section – 25 out of 100. Proportions are often expressed as a percentage. The above example would be 25%.

Rate is a ratio in which a measure of time is included in the denominator. An example is the incidence (number of new cases) of breast cancer in a given year.

Ratios, proportions, and rates can easily be confused because they are often used interchangeably, though technically they often should not be. In order to interpret the data correctly, the most important factor is determining exactly what constitutes the numerator and the denominator.

CONFIDENCE INTERVALS

The Confidence Interval (CI) is a range of values that represents the true value of a statistic. Most often, a 95% CI is given, which means that there is a 95% chance the range given includes the true value. If the CI is very wide, the estimate is less reliable. The main factor affecting the width of the CI is the number of people surveyed or otherwise included in the population being measured. So, for small surveys, the CIs are often wide.

When comparing data points such as the answers to survey questions between different age groups or genders, one often looks at the CIs to decide whether or not there are true differences. In general, if the CIs overlap, the numbers are not statistically different. One common method for dealing with wide and overlapping CIs is to compile multiple years of data together to create a sufficiently large sample size.

INCIDENCE AND PREVALENCE

In chronic diseases, we commonly measure disease rates with two different methods:

Incidence: the number of newly diagnosed cases of a disease occurring in a population in a given period of time (usually a year).

Prevalence: the total number of cases of a disease in a population at a given point or period in time.

Why is it important to distinguish between these two measures? Incidence gives us a barometer of how many new cases of a disease are being detected, while prevalence gives us a barometer of how long people are living with a disease. For instance, cancer *incidence* rates are declining across the United States, although not in Maine. Incidence may be declining due to a reduction in causative factors for cancer, such as tobacco addiction. Cancer *prevalence* rates are rising across the nation, which may be due to improved treatments leading to longer survival.

For short-lived diseases, in which people either die or are cured quickly, incidence and prevalence are very similar. Examples include many acute infectious diseases such as bacterial meningitis or bacterial diarrhea.

Some Major Maine Public Health Data Sets

BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

BRFSS is an ongoing State-based system of health surveys conducted by telephone interview using random digit-dialed probability samples of adults ages 18 years and over. Conducted and collected in Maine by the Bureau of Health, BRFSS is funded and analyzed by the Centers for Disease Control and Prevention (CDC).

The national sample size, which is increasing annually, yielded over 200,000 interviews in 2001. It should be noted that national BRFSS data is an average of each state's weighted data and not a weighted average.

Maine's sample size was over 2,400 in 2001, which is up from less than 1,700 in 1999, representing over a 40% increase. Major topics include alcohol and tobacco use, physical activity, nutrition, screening for certain cancers, health status, health care access, hypertension awareness, and diabetes awareness. Some topics are asked annually, some biennially, and others at the discretion of each state.

In 2000, MaineHealth funded extra surveys to be conducted as part of BRFSS in order to collect more localized data. Over 4,600 people were surveyed that year. The Bureau of Health worked on analyzing the data, and as a result of this collaboration, there is county-level BRFSS data for 10 out of 16 counties in Maine for 2000.

Data from BRFSS is available on-line at www.cdc.gov/brfss or www.state.me.us/dhs/bohodr/brfsspge.htm for county-level data. Maine's coordinator for BRFSS is Judith Graber at the Bureau of Health (207) 287-1420 or judith.graber@state.me.us.

INFECTIOUS DISEASE REPORTS

Infectious disease reporting requirements are established by statute. Maine licensed health care providers and facilities are required to report approximately 50 diseases to surveillance professionals to the Bureau of Health's Division of Disease Control. These reports are used to help identify any outbreaks and to assure that appropriate interventions are being implemented to prevent the spread of diseases. Data that are stripped of personal identifying information are available in annual reports as well as through the Centers for Disease Control and Prevention that collects this aggregate data from each state and reports it in their Morbidity and Mortality Weekly Report. For more information, contact the Bureau of Health's Division of Disease Control at (207) 287-3960.

MAINE CANCER REGISTRY

Created in the 1980s, the Maine Cancer Registry, housed in the Bureau of Health, collects statewide cancer incidence and mortality data; identifies cancer trends among Maine's citizens; and responds to queries and data requests from researchers, other agencies, and the public. The goal of these activities is to facilitate cancer prevention and control. The Cancer Registry may be contacted at (207) 287-5272.

MAINE HEALTH DATA ORGANIZATION (MHDO)

MHDO was established as an independent executive agency in 1996 to continue the data collection function of the former Maine Health Care Finance Commission. Although the original data collection focused on hospital inpatient (1986) and non-hospital ambulatory data (1990), MHDO is now moving toward collecting all health care claims data from all health care providers and all payers. Pertinent web sites include: www.healthweb.state.me.us for an interactive health data site or www.mhdo.state.me.us for MHDO's homepage.

MAINE YOUTH DRUG ALCOHOL USE SURVEY (MYDAUS)

MYDAUS is conducted by the Maine Office of Substance Abuse, Department of Behavioral and Developmental Services. It has been conducted periodically since 1988. The 1998 and 2000 surveys were administered to about 22,000 and 30,000 students respectively in grades 6–12. However, since the survey did not use a random sample of schools, the data collected was not representative of all schools or students in the State, just those who completed the survey. Methodologies used by this survey have varied between the different years it has been conducted, so the ability to compare them is limited. MYDAUS data can be found on-line at <http://www.state.me.us/bds/osa/ostats.htm>.

PREGNANCY RISK ASSESSMENT MONITORING SYSTEM (PRAMS)

PRAMS is an ongoing sample survey conducted since 1987 and administered by the Bureau of Health to Maine mothers within a few months after delivery. The goal of this survey is to provide State-specific information that assists in program and policy planning that will improve the health of mothers and infants. Questions are asked about experiences before, during, and after pregnancy and include such items as tobacco and alcohol use, breastfeeding, prenatal care, health insurance coverage, infant care, and exposure to violence. PRAMS is funded by the Centers for Disease Control and Prevention (CDC) and is conducted in most but not all states. The average sample size in Maine ranges from 1,500 to 2,000 annually. Marty Henson is Maine's coordinator for PRAMS. Information may be obtained by calling (207) 287-5445 or by visiting the following Web site: <http://www.state.me.us/dhs/bohodr/index.htm>.

VITAL RECORDS

Vital records are reported to the Bureau of Health and include records of births, deaths, fetal deaths, marriages, and divorces. Although Maine became a state in 1820, vital records were not collected routinely by the State until 1892. Approximately 42,000 events are currently registered each year. Information can be obtained by calling (207) 287-5500 or visiting <http://www.state.me.us/dhs/bohodr/index.htm>.

YOUTH RISK BEHAVIOR SURVEY (YRBS)

YRBS uses a questionnaire administered to a sample of Maine high school students (and middle school students grades 6–8 starting in 1999) gathered every two years since 1993. YRBS is conducted in other states; the Centers for Disease Control and Prevention (CDC) funds and analyzes the survey. With a sample size of about 2,200, the survey collects data on six categories of health risk behaviors: injury, tobacco use, alcohol and other drug use, sexual behavior, diet and nutrition, and physical activity. In Maine, the Department of Education administers the survey. Information collected from YRBS is used to more effectively address health issues our youth are facing.

When the response rate has an overall response rate of 60% or higher, the CDC statistically weighs the results so that the numbers can be generalized to all public schools for the grades surveyed. When the overall response rate is below 60%, the CDC cannot perform such statistical analysis, and the data applies only to the students who actually completed the questionnaire. Maine's YRBS data for 1993 and 1999 was unweighted, so information cannot be compared reliably with data from 1995, 1997, and 2001.

Data from the YRBS is available on-line at <http://www.maineeshp.com/survey.html>. National figures can be found at <http://www.cdc.gov/needphp/yrbs/index.htm>.

THE MAINE ADULT TOBACCO SURVEY (MATS)

The Maine Adult Tobacco Survey (MATS) of 5,000 Maine adults, ages 18 and over, was conducted from August 1999 to May 2000 by the Maine Bureau of Health, Partnership For A Tobacco-Free Maine. The sample was selected from six regions in the state. Each region encompasses two to four counties of the state, matched on demographic and economic characteristics. The respondents were randomly selected and interviewed by telephone on Cigarette Use, Cessation, Use of Other Tobacco Products, Environmental Tobacco Exposure and Policies, Tobacco Beliefs and Perceptions, and Demographics. A modified version of the survey will be conducted in 2003. For more information on the MATS, please contact Dorean Maines at the Maine Bureau of Health at (207) 287-3268.

THE MAINE YOUTH TOBACCO SURVEY (MYTS)

The Maine Youth Tobacco Survey (MYTS), a school-based survey of Maine youth in grades 6–12, is conducted as part of the Independent Evaluation of the Partnership For A Tobacco-Free Maine. The survey is a self-administered questionnaire developed to obtain the opinions, attitudes, beliefs, and behaviors of Maine youth with regard to tobacco use and related behaviors. The instrument is more extensive but similar to the core Youth Tobacco Survey that has been implemented by the Center for Disease Control and Prevention (CDC) throughout the US. The survey was conducted in Maine in 1999 and 2001, using a slightly shorter version of the survey for students in grades 6–8. A random sample of 120 schools was selected that was representative of all middle and high schools from across the State. Of these 120 schools, approximately 100 schools participated in the surveys. The entire population of the school completed the survey in the selected schools, resulting in sample sizes of nearly 25,000 students. Weighting of the sample was done for the school level and for the student level. Another youth survey is planned for 2004. For more information on the MYTS, please contact Dorean Maines at the Maine Bureau of Health at (207) 287-3268.

Some Helpful Government-Related Health Websites

Aging

National Aging Information Center
<http://www.aoa.gov/naic>

AIDS/HIV

CDC National Prevention Information Network (NPIN)
<http://www.cdcnpin.org>

Alternative Medicine

National Center for Complementary and Alternative
Medicine (NCCAM) Clearinghouse
<http://nccam.nih.gov>

Asthma

National Heart, Lung, and Blood Institute (NHLBI)
Health Information Center
<http://www.nhlbi.nih.gov>

Centers for Disease Control and Prevention (CDC)
<http://www.cdc.gov>

Consumer Information

Consumer Information Center
<http://www.pueblo.gsa.gov>

Criminal Justice

National Criminal Justice Reference Service
<http://www.ncjrs.org>

Deafness/Communication Disorders

National Institute on Deafness and Other Communication
Disorders (NIDCD) Information Clearinghouse
<http://www.nidcd.nih.gov>

Disability/Rehabilitation

National Center for the Dissemination of Disability
Research (NCDDR)
<http://www.ncddr.org>

The New Freedom Initiative for People with Disabilities
<http://www.disabilities.gov>

Disease Prevention/Health Promotion

Centers for Disease Control and Prevention (CDC)
<http://www.cdc.gov>

Healthfinder
<http://www.healthfinder.gov>

National Center for Chronic Disease Prevention and
Health Promotion (NCCDPHP)
<http://www.cdc.gov/nccdphp>

Drug Policy

White House Office of National Drug Control Policy
<http://www.whitehousedrugpolicy.gov/policy/index.htm>

Environmental Health

Environmental Protection Agency
<http://www.epa.gov/natlbra/hqirc/about.htm>

Family Planning

Office of Population Affairs
<http://www.hhs.gov/opa/clearinghouse.html>

Food and Drug Safety

Food and Drug Administration
<http://www.fda.gov>

Health Care Policy and Research

Agency for Healthcare Research and Quality (AHRQ)
<http://www.ahrq.gov>

National Information Center on Health Services Research
and Health Care Technology (NICHSR)
<http://www.nlm.nih.gov/nichsr/nichsr.html>

Health Statistics

National Center for Health Statistics
<http://www.cdc.gov/nchs>

Highway Safety

National Highway Traffic Safety Administration (NHSTA)
<http://www.nhsta.dot.gov>

Homelessness

National Resource Center on Homelessness and
Mental Illness
<http://www.prainc.com/nrc>

Infectious Disease & Immunization

National Institute of Allergy and Infectious Diseases
(NIAID)
<http://www.niaid.nih.gov/>

Injury Prevention

US Consumer Product Safety Commission (CPSC)
<http://www.cpsc.gov>

Kidney/Urologic Diseases

National Kidney and Urologic Diseases Information
Clearinghouse (NKUDIC)
<http://www.niddk.nih.gov/health/kidney/kidney.htm>

Lead Poisoning

National Lead Information Center
<http://www.epa.gov/lead/nlic.htm>

Library Services

National Library of Medicine
<http://www.nlm.nih.gov>

Limited English Proficiency

US Department of Education
<http://www.ed.gov/offices/OCR>

Some Helpful Government-Related Health Websites

Maine Addresses

Maine State Government
<http://www.maine.gov>

Department of Human Services
<http://www.state.me.us/dhs>

Bureau of Health
<http://www.state.me.us/dhs/boh>
<http://www.mainepublichealth.org>

Bureau of Medical Services (MaineCare)
<http://www.state.me.us/bms>

Department of Behavioral and Developmental Services
<http://www.state.me.us/bds>

Department of Environmental Protection
<http://www.state.me.us/dep>

Maine Center for Public Health
<http://www.mcph.org>

Healthy Maine Partnerships
<http://www.healthymainepartnerships.org>

Maternal/Child Health

Maternal Child Health Bureau, Health Resources
and Services
<http://www.mchb.hrsa.gov>

National Center for Education in Maternal and
Child Health
<http://www.ncemch.org>

National Maternal and Child Health Clearinghouse
(NMCHC)
<http://www.ask.hrsa.gov>

Medicaid

Centers for Medicare and Medicaid Services (CMS)
<http://www.cms.hhs.gov>

Medicare

Center for Medicare and Medicaid Services (CMS)
<http://www.medicare.gov>

Mental Health

Center for Mental Health Services' Knowledge Exchange
Network
<http://www.mentalhealth.org>

National Institute of Mental Health (NIMH)
<http://www.nimh.nih.gov>
<http://www.samhsa.gov>

Minority Health

Office of Minority Health
<http://www.omhrc.gov>

Nutrition

Food and Nutrition Information Center
<http://www.nal.usda.gov/fnic/>

Occupational Safety

National Institute for Occupational Safety and Health
(NIOSH)
<http://www.cdc.gov/niosh>

Oral Health

National Oral Health Information Clearinghouse (NOHIC)
<http://www.nohic.nidcr.nih.gov>

Osteoporosis

NIH Osteoporosis and Related Bone Diseases –
National Resource Center
<http://www.osteo.org>

Physical Fitness

President's Council on Physical Fitness and Sports
<http://www.fitness.gov>

Primary Care

Health Resources and Services Administration (HRSA)
<http://www.ask.hrsa.gov>

Rural Health

Rural Information Center Health Service (RICHS)
<http://www.nal.usda.gov/ric/richs>

Substance Abuse

Substance Abuse and Mental Health Services
Administration
<http://www.samhsa.gov>

Tobacco

<http://www.cdc.gov>

Veterans Affairs

<http://www.va.gov>

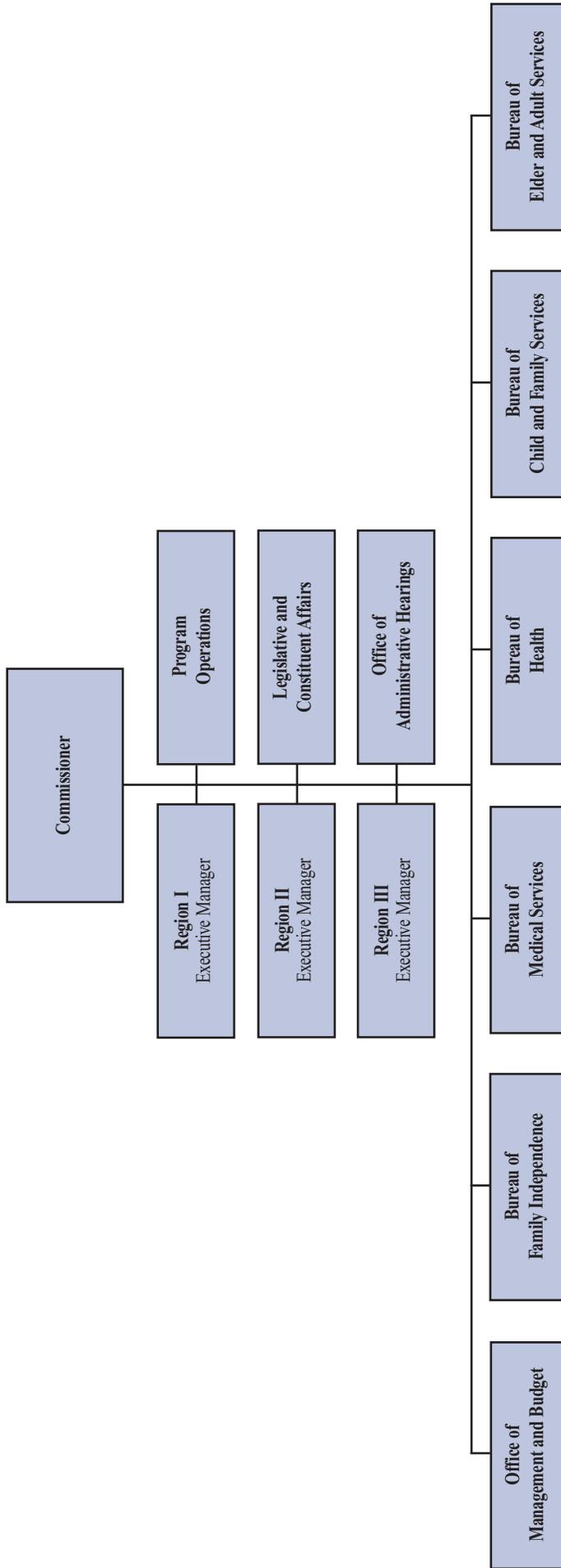
Violence Prevention

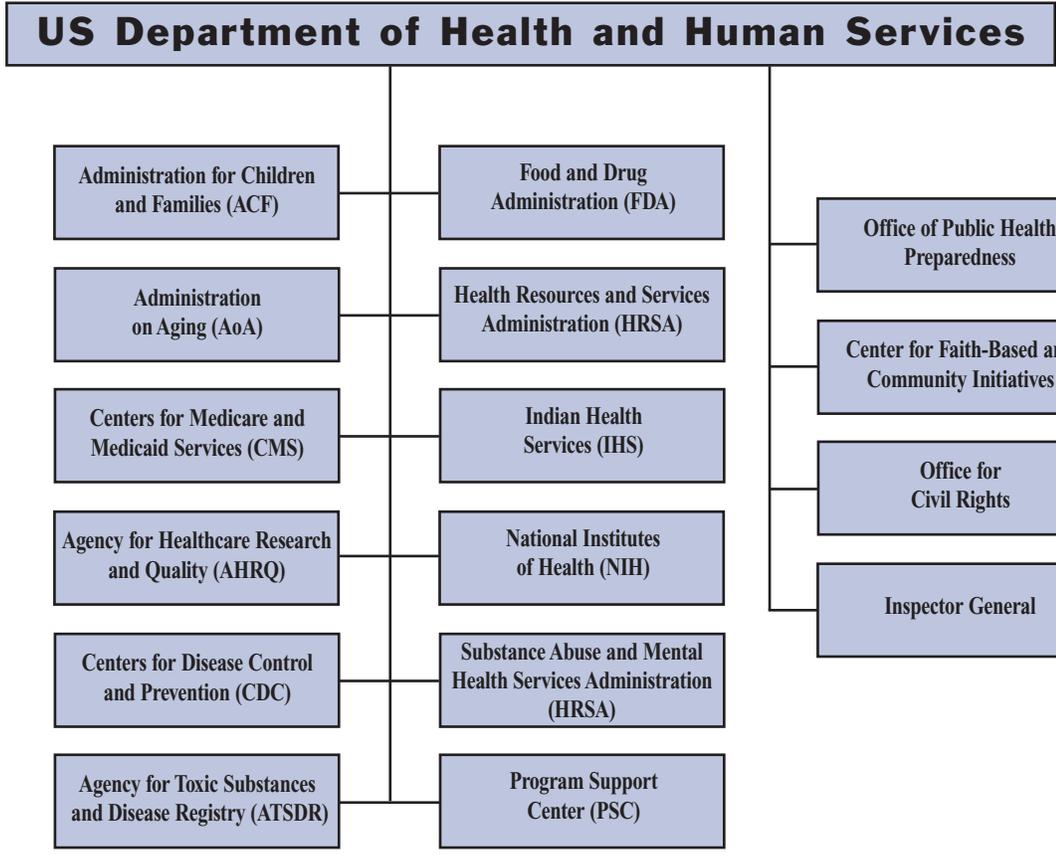
National Youth Violence Prevention Resource Center
(NYVPRC)
<http://www.SAFEYOUTH.org>

Women's Health

National Women's Health Information Center (NWHIC)
<http://www.4woman.gov>

Maine Department of Human Services





Highlights of *Healthy Maine 2010* Evolution

January 2000:

Healthy People 2010 is unveiled at a national conference. Several from Maine attend and return with ideas for *Healthy Maine 2010*.

Summer 2000:

Bureau of Health holds a stakeholders' meeting with about 50 in attendance to obtain input to the process for creating *Healthy Maine 2010*.

September 2000:

Healthy Maine 2000: A Decade in Review is printed by the Bureau of Health in order to communicate final progress on Healthy Maine 2000 goals and objectives.

October 2000:

Maine Public Health Association's Annual Conference in collaboration with the Bureau of Health officially kicks off the *Healthy Maine 2010* Initiative. Participants attend priority area break-out sessions, give input to the content of *HM2010*, and sign up for work groups.

October–January 2001:

Members for Priority Area Work Groups are recruited through the Maine Public Health Association annual meeting, Bureau of Health mailing lists (a mailing to organizations representing disparate populations), newsletters, and Listservs.

January–June 2001:

Priority Area Work Groups meet, each for a half day, to discuss and choose goal and objectives for each focus area, as well as to discuss health disparity and other major issues that should be included in *Healthy Maine 2010* for that priority area. Some provide this input by email. About 450 from across Maine participate.

January 2001–September 2002:

A Listserv for work group members is created and maintained by Sharon Leahy-Lind for each Priority Area Work Group for periodic updates, as well as for ongoing input.

June–September 2001:

Work Group input is reviewed and Dr. Mills prepares the first drafts of Priority Area Chapter narratives for *Healthy Maine 2010: Longer and Healthier Lives*. Sharon Leahy-Lind and Bureau of Health staff begin data collection efforts.

August–October 2001:

Chapters are sent by email over the priority area Listservs to all Work Group Leaders and Members, who in turn provide edits and other suggestions for the first drafts of Priority Area Chapters.

September 2001–March 2002:

HM2010 work is, for the most part, put on hold while Bureau of Health and many other Maine health and public health professionals work to prepare Maine for a possible weapons of mass destruction attack, and respond to national anthrax attacks. Data gathering and analysis continues during this time.

April–July 2002:

- Dr. Mills incorporates edit suggestions into *Healthy Maine 2010: Longer and Healthier Lives*;
- An additional round of reviews and submission of additional edit suggestions of chapter text by Work Group Leaders are conducted and then incorporated by Dr. Mills;
- Data for objectives are collected and analyzed by Sharon Leahy-Lind with assistance from Work Group Leaders and a number of Bureau of Health staff;
- Preliminary graphs for each objective are created by Sharon Leahy-Lind;
- 2010 targets are chosen for each objective by Work Group Leaders and pertinent experts;
- Some preliminary information for *Healthy Maine 2010: Opportunities for All* is collected and some interviews with subject experts are conducted by Sharon Leahy-Lind and other staff.

June–September 2002:

- First draft of *Healthy Maine 2010: Opportunities for All* is written by Dr. Mills using input from gathered information, Bureau of Health data resources, some Work Group Leaders and Members, and a number of statewide experts.
- CD&M Communications Team does layout and creates graphics for a first full draft of *Healthy Maine 2010: Opportunities for All*.
- Work Group Leaders, pertinent Bureau of Health staff, and all participants and contributors to this complimentary publication review and provide edit suggestions to *Healthy Maine 2010: Opportunities for All*. Dr. Mills edits and incorporates these suggestions into an updated draft.

August–October 2002:

- CD&M Communications Team puts together first drafts of *Healthy Maine 2010: Longer and Healthier Lives* with chapter text and objective graphs. Work Group Leaders and some other significant contributors provide edit suggestions. These edits are incorporated by Dr. Mills, along with three additional rounds of edits.
- Second round of layouts is conducted by the CD&M Communications team, and a second round of edits is conducted of *Healthy Maine 2010: Opportunities for All* by Dr. Mills.

November–December 2002:

- Final edits are done on both companion books. They are printed.
- 7,000 order forms are sent across the State, notifying people how to obtain copies of both *Healthy Maine 2010: Longer and Healthier Lives* and *Healthy Maine 2010: Opportunities for All*.